# INDIANS AT · WORK

· MARCH 1, 1934 ·

A NEWS SHEET FOR INDIANS
AND THE INDIAN SERVICE

OFFICE · OF · INDIAN · AFFAIRS
WASHINGTON, D.C.

# I N D I A N S  A T  W O R K

CONTENTS OF THE ISSUE OF MARCH 1, 1934

Volume I  Number 14

The Indian land and home rule bill is now before Congress and the Indians. Three hearings have been held by the Indian Committee of the House, and the first Senate hearing will take place February 27.

Thousands of copies of the bill and of a memorandum explaining it have been sent to agencies, tribal councils and individual Indians.

The reception of the bill, by the press and by Congress, has been extraordinarily favorable to the present date. From Congress only one adverse criticism has come, a Senator writing as follows:

> "I appreciate your desire to solve the Indian problem, but I am afraid it is like scrubbing a dirt floor -- the more water you put on it the more mud there is to scrub up."

The Indian congresses, to consider the bill, start at Rapid City, South Dakota, March 2d through March 5th. There the Plains tribes will meet. Other congresses will be as follows:

All Pueblo Council, Santo Domingo, New Mexico.. March 11

Navajo Council, Ft. Defiance, Arizona..... March 12 and 13

Northwest (Idaho, Washington, Oregon and Northern California) Salem, Oregon.. March 8 and 9

Southern Arizona (Pima-Papago, Truxton, Canon, Colorado River, Ft. Apache, San Carlos) Phoenix, Arizona.... ..... March 15 and 16

Mission and Yuma Indians, Riverside, California. March 17 and 18

The Oklahoma and the Minnedota-Wisconsin congresses have not yet been finally arranged.

Indian responses have as yet been scattering, and most of them were drafted before the bill had reached the tribes. Generally, the tentative verdicts of the tribes have been favorable, but a Pueble Governor wircs: "We have held a meeting and we do not want the New Deal." One of the Pacific Northwest tribes, as reported by the newspapers, cries loudly, "Thumbs down on communism and socialism." Among that tribe, numbering 2,900 there are 924 landless members at present, whom allotment has rendered landless; and heirship sales, if the allotment system be continued, will render a majority landless ere long.

Some Misunderstandings Among The Indians

1. Many Indians, it appears, have not yet grasped the fact that the "home rule" features of the bill are not mandatory but are optional with the tribes. No one needs to accept them unless he wants to.

2. Other Indians have somehow gained the notion that the bill would take away the land from Indians who have got land and give it to landless Indians.

This misunderstanding probably is due, on many reservations, to a propaganda by neighboring white interests, particularly the white holders of Indian leased land.

These white lessees pay a smaller rent because the Indian land is exempted from taxes. The tax-immunity which Congress meant as a benefit to the Indians is transferred to the white lessees under the leasing system. And these same white lessees, if the allotment system shall continue unchanged, will become the owners of

the Indian lands, through sales under the heirship clauses of the Allotment Act.

These white lessees are situated close to the Indians and their influence ramifies through the neighboring white communities, and they are more or less intrenched in the internal politics of some of the tribes. Their opposition to the land and self-government bill is a foregone conclusion.

The bill would greatly encourage the Indians in the use of their own land; would help them organize into cooperative and stock raising associations, so that they might themselves reap the benefits of their holdings. The bill, of course, does not prohibit the leasing of Indian land, but it would help the Indians to reestablish their own cattle and farming industries.

3. From one northern reservation comes the statement that the pending bill would throw out of the tribes all of the mixed-bloods and deny them a share in present and future benefits. This misinformation is complete. The terms of the bill give the answer.

Behind and beneath any Indian bill, is the Constitution of the United States. Under the Constitution, property rights are vested, and no action by Congress can annul them. The present bill, however, does not leave this protection merely as a constitutional guarantee, but carries it over into express and binding guarantees safeguarding every property and vested right of every individual Indian.

4. The bill broadens the Federal guardianship over Indians, and extends Federal benefits to the Indians made landless by the allotment operations.

5. The bill makes permanent the restriction against alienation of Indian lands, along with their immunity from taxation.

This editorial deals merely with a few points which have confused some of the Indians; they will confuse the Indians no longer, after the bill is carefully examined.

Let The Indians Read The Bill Themselves

This present moment is truly a moment of testing for Indians. It is not important that Indians shall accept the pending bill on faith, or shall endorse its clauses in a wholesale way. The bill needs examination and criticism, and it will be amended in numerous particulars before it becomes law.

But it is supremely important that Indians shall themselves take the primary responsibility in a matter which strikes to the heart of their lives and makes possible the realization of their greatest hopes.

It is supremely important that Indians shall confront the issue and the opportunity thoughtfully, unafraid, and with determination to see their own problem steadily and to see it whole.

Until now, Indians never have been permitted a voice in any major question affecting their lives and their property.

Now, by the mere act of submitting the pending bill to Indian referendum, the Indian Administration is placing Indian destiny in Indian hands.

The great spirit of the past -- the warrior spirit -- will not desert any Indian tribe now, when opportunity, delayed for a hundred years, has at last come.

JOHN COLLIER,

Commissioner of Indian Affairs.

## TWO MILLION MAN DAYS OF INDIAN LABOR

The second "enrollment period" of the Indian Emergency Conservation Work ends on March 31 - as is the case also of the Civilian Conservation Corps. At that time the Indian Emergency Conservation Work program will have been at its full strength for nine months, with an average of around 11,000 enrolled men on the payroll for around 20 days monthly. That totals up to 1,980,000 man-days of Indian labor. A huge reservoir of man-power, surely.

That fact helps to explain why Indians are piling up such huge quantities of new construction. Without a realization of the vastness of the man-power being expended, one can hardly account for the quantities of work being done.

INDIANS AT WORK for February 1 carried a statistical article on the forestry items of the Indian Emergency Conservation Work program; and the issue of January 1 carried one on the range-improvement items. The former featured the nearly 5,000 miles of "fire-lane" work by Indians; and it featured also the 2,000 miles of new telephone lines on Indian tribal lands. Then were listed the quantities of an impressive miscellany of lesser items of forestry work included in the Indian Emergency Conservation Work program.

The range-improvement list, in the issue of January 1, featured the 1,000 livestock reservoirs being built on prairie tribal lands. End-to-end, these reservoir dams would make a high dirt wall about 57 miles long, and the areas they will open up to grazing will exceed a hundred-mile square. That does not include the developing of 1,394 springs or wells for livestock, nor a whole galaxy of lesser achievments for the prevention of the soil erosion that would result from over-grazing. Not the least of the latter, surely, is range-fence building - to aggregate 2,146 miles!

## The IECW "Buildings Program"

The aggregate number of buildings to be put up in connection with these forestry and and range-improvement campaigns of the Indian Emergency Conservation Work program is characteris-

tically large. Numbers of fire-rangers' cabins and lookout towers were to be expected, of course. So were sundry structures on public camp grounds. Semi-permanent buildings would be necessary, also, to house supplies and tools. The total of buildings erected or contemplated on December 31 was 870 - enough for a small town. These buildings are mostly incidental to the main objectives of the Indian Emergency Conservation Work; yet their number is so large as almost to warrant our speaking of a separate "buildings program". They are classified as follows:

| | Total Contemplated | Completed Before 1/1/34 |
|---|---|---|
| Dwellings at permanent stations | 155 | 117 |
| Dwellings at temporary stations | 196 | 176 |
| Tool houses and boxes | 82 | 74 |
| Barns at permanent stations | 6 | 5 |
| Barns at temporary stations | 35 | 24 |
| Public camp ground buildings | 14 | 7 |
| Public camp ground latrines | 71 | 51 |
| Office quarters | 14 | 13 |
| Other structures | 297 | 246 |
| TOTAL | 870 | 713 |

## The Simplicity of IECW Projects

The simple, practical nature of the Indian Emergency Conservation Work projects will account in part for their large dimensions. The dams for 1,000 livestock reservoirs that Indians are building are of prairie dirt, not of cement or granite. The 507 bridges, necessary on their fire trails, are being built for durability, not for architectural effect.

Two million man-days of labor put into simple, utilitarian work projects like these could not fail to produce large-scale results.

# IECW CREWS ERADICATE WHORLED MILKWEED - A MENACE TO LIVESTOCK IN THE WESTERN STATES

By Guy Hobgood

Superintendent, Walapai Reservation

The problem of how to control the spread of the whorled milkweed in the western States is one worthy the attention of our best scientists. For, unless measures are taken for the control of this poisonous weed, the livestock business in large areas of Arizona will become too hazardous to justify continuation.

## Two Common Species

Two species are found in Arizona, horsetail milkweed (asclepias galioides) and the Mexican milkweed (asclepias Mexicana) both belonging to the family asclepiadaceae. Of these the galioides is the most common and the most deadly poison.

The two species are very similar in appearance and may be easily mistaken for each other by anyone who has not had training in plant identification. Both have narrow leaves, arranged more or less in whorls. Both species have a small white blossom occuring in heavy clusters at the end of the stems. Each plant has several fusiform or spindle-shaped pods filled with seed, which are covered with a white hairy or pubescence-like cotton, which makes the seed scatter easily - thus causing the spread of the weed to be very rapid when moisture conditions are favorable for the seed to germinate. The pods range from one to three inches in length.

## The Danger To Livestock

The whorled milkweed is capable of spreading in two different ways. It has a long jointed root and from every joint may grow a sprout which will develop into another plant.

Whorled milkweed requires more moisture than is found on the average run of Arizona ranges, and in dry areas is found only along washes and other areas where there is moisture. Be-

cause of this habit of grewth in arroyos and dry washes, it would be hard to control by means of sprays, for it would be inaccessible to spraying machinery in such places. However, there is considerable open level land that is badly infested in the eastern portion of the Walapai Reservation which could be treated with spray materials if the machinery for applying them is not too expensive.

The whorled milkweed is poisonous to horses, cattle and sheep. Losses have been especially heavy on sheep ranges. Cattle losses on the Truxton Canon Agency were heavy during the summer months of 1933.

One of the peculiar characteristics of whorled milkweed poisoning among cattle is that the animals can consume considerable quantities of the weed with no very serious apparent results as long as they remain comparatively inactive. However, if they are moved about much, they will fall to the ground, go into violent convulsions and die. The most characteristic symptom in acute cases of the poisoning is the presence of violent convulsions which are sometimes accompanied by a very high temperature. In milder cases there are no convulsions but the animals may stagger about. The weakness seems to be most pronounced in the hind legs. This condition may continue for several days before the animal shows signs of recovery.

The seriousness of the whorled milkweed on the Truxton Canon Agency was forcibly brought to the attention of those in charge at the time the cattle were being shipped in July and August, 1933. The dipping made it necessary to drive many of the cattle for distances ranging from five to fifty miles. Not knowing the condition of the animals as to milkweed poison, the drivers undertook moving some of them during very warm weather. It was observed that many seemed unduly tired for the slow manner in which they were being moved, but before the full extent of the danger was realized a number of animals had fallen to the ground and gone into convulsions. All such cases resulted in death.

The total number of cattle known to die from this poisoning during the summer was sixty head. This number included cattle on leased areas of the reservation - cattle not belonging to Indians. It is not possible to get an accurate count on losses from poisoning, of course, as some deaths will occur where there is no witness, leaving the cause problematical.

The foreman of the Three V Cattle Company, which leases from the eastern portion of the Truxton Canon Agency, estimated their losses at about thirty head during the summer. The losses in the Indian herds may have been a little heavier.

## Remedial Efforts Under IECW

The rapid spread of the whorled milkweed on the Walapai Reservation is becoming a very serious danger to our cattle

industry. Realizing this, we have made eradication of the weed one of our projects in our Emergency Conservation Work. The project was to include all infested areas, except that portion of the reservation which is being leased. The total area infested was estimated at about 6,000 acres. While this is not a large tract in acre numbers, yet because it is in narrow arroyos and washes it is strung out until it is accessible to most of our grazing area on the entire reservation. There is probably 3,000 acres of the weed on the eastern or leased portion of the reservation which should also be eradicated. Of the 6,000 acres originally included for eradication, 3,500 acres have been cleared of the weed. There is about 2,500 acres yet to be dug or pulled out. This, in all probability, will be dug out during the spring and summer of 1934.

About thirty men were employed in digging the milkweed for a period of two months. When it is considered that every foot of the 3,500 acres was gone over, in order that the roots should be dug out, it will be seen that these men were working hard to earn their wages.

## The Value of Eradication

The value of the milkweed eradication work, when measured in terms of livestock lost during the past growing season, would not exceed $2,000. However, when we realize that the losses were much greater that year than in any preceding year, and that there is danger that these losses will increase until they become so great that the livestock business can no longer be made profitable, we can see that if we stop our losses, the entire value of our cattle business, about $14,000 might be charged up to the milkweed eradication work.

## The Method Of Eradication

The portion of the whorled milkweed plant growing above the ground is an annual, growing and dying with each season. However, the root is perennial and lives on year after year, giving rise to new plants each year.

It is this perennial nature of the root that makes it necessary to destroy every part of the plant, and for this reason the eradication work which we have done has consisted in digging the plants out. It is a very slow process and even with the greatest care there is danger that portions of the root will be left, sufficient to sprout and give rise to a new plant. So, the work of eradication must go on from year to year with never a let-up in the "watchful waiting" for a stray plant to appear, so that it may be rooted up and destroyed before it has time to ripen its seed.

Whorled milkweed will grow and remain green and succulent when the range is too dry to grow grass. It is, at this time, when

the range is dry, that the danger of poisoning stock is greatest. At such times the stock will eat the fresh green weed in sufficient quantities to cause death. The ability of this plant to grow and remain green when the rest of the range is dry would indicate that it does not require much moisture. However, it will not spread to dry areas and only propagates on lands having more than an average amount of moisture. This inability to reproduce itself in the dry areas is, in all probability, due to the fact that it takes considerable moisture for the seed to germinate and get roots started in the dry soil. This lack of hardiness on the part of the seed is the only thing that has saved the livestock industry in the past. This alone will not save it in the future. It will require the concerted efforts of men to check the spread of this dangerous plant pest and make the business of cattle raising safe on the Arizona ranges.

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Cover Picture. The cover picture for this issue of INDIANS AT WORK shows a piece of bridge construction done by Indian Emergency Conservation Work crews at Warm Springs.

Corrections. Mr. Claude C. Cornwall calls our attention to the fact that the cover picture of the February 1 issue of INDIANS AT WORK was erroneously acknowledged. It was attributed to San Carlos. Mr. Cornwall informs us that it is a scene from Sells. We regret the error. Pictures are frequently sent into the Office with no agency name written on them. That makes errors a likelihood.

A second error was the attribution of the road building job shown in the top picture on page 44 of our February 15 issue to Indian Emergency Conservation Work Crews. This is a Federal-aid highway, not an IECW project.

## THE RELATION OF FIRE, FLOOD AND EROSION

Information, in most striking form, is contained in the article below as to what happens when protective plant covering is destroyed over a considerable area. The moral should be plain to all people interested in the conservation of Indian lands - where erosion is one of the great problems. The article is quoted in part from the FORESTRY NEWS DIGEST.

That the fire which last fall destroyed the brush cover on 5,000 acres of watershed in the Los Angeles area was the primary cause of the great loss of life and the excessive property damage done by the recent disastrous storm in southern California is indicated by a preliminary report just received from field representatives by the U. S. Forest Service.....

On Thanksgiving Day a fire known as the Pickens Canyon fire burned over 5,000 acres in four small canyons near Los Angeles. Immediately after the fire, the Forest Service, in cooperation with the local authorities, sowed some 4,000 acres of the area with mustard to reestablish a protective cover for the watershed. Unfortunately this cover crop had not yet germinated when the major storm of December 30 and 31 occurred.

"In a period of thirty-six hours, fourteen to sixteen inches of rainfall was recorded in raingauges that the Forest Service had set up," E. I. Kotok, director of the Forest Service's regional experiment station in California, reports. "A storm of this extraordinary intensity and duration had not been recorded in seventy years.

"The peak of the storm occurred at midnight of December 31 and millions upon millions of tons of material immediately moved down the mountainside is channels that were inadequate to carry the load, destroying everything before it - homes, bridges, streets - and trapping hundreds of people. At least sixty persons were drowned or smothered within this mud flow. The damage is estimated to have been at least five million dollars."

Although high water occurred in all the streams of this region, there were no major floods in any of the adjacent streams, and comparatively little silt was carried from other watersheds.

### The Terrifically High Damage On The Burned-Off Area

For several years the Forest Service has had under way a water run-off experiment in San Dimas Canyon, not far from the Pickens Canyon area. Shortly before the storm, several small plots used in this study had been experimentally burned over....Twelve inches of rainfall were recorded at San Dimas, approximately the same amount as that in Pickens Canyon. During the storm, the unburned plots showed an average of only eight buckets

of surface run-off, while the burned-over plots showed three hundred buckets for the same period.

"Roughly, then," Kotok reports, "more than thirty times as much water came off a burned area, which means that in the Pickens Canyon area, if the protective brush cover had been left intact, less than one-thirtieth the run-off would have occurred. This is the most striking example that we have ever recorded of the potential capacity of vegetative cover to retard run-off, even in terrential rainfall."

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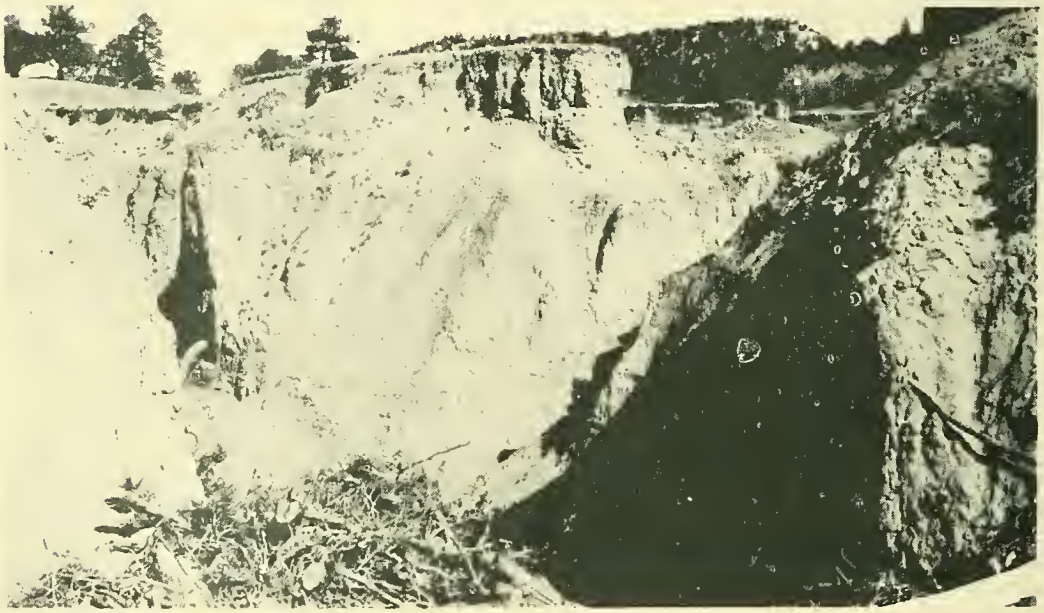


A striking picture of erosion is shown above, sent the Office from Mexican Springs. The progress of this destruction is such that the whole valley is menaced. The result is utter unproductivity of the soil.

## EROSION IN WAKAMBA LAND

(The following article, quoted in part from the January 1930 issue of THE NINETEENTH CENTURY, is evidence that the attention of enlightened governments everywhere has been for some time directed toward the problem of erosion control. This piece, written by Sir Daniel Hall, Chairman of the Commission of Agriculture in Kenya, is of particular interest to the Indian Service as it deals with erosion as a result of overgrazing - the problem that is so acute in our own Southwest.)

"....The great object of the M'kamba man is to accumulate livestock - chiefly cattle and goats, with a few sheep. They are kept as tokens of wealth and as currency for the purchase of wives, the price of which may range from 90 to 120 goats. Numbers alone count; quality is not regarded. There is no selection, no castration of the excess males; the breeding is as Nature wills. Save for this one purpose of wive-buying and for their skins when they die, the livestock serve no economic purpose; the Wakamba will neither kill them nor sell them, 'Money does not breed' is the native axiom, and Wakamba are known to pay Indian traders to keep their money safe for them. Rather than kill for food, a M'kamba man has been found dying of starvation with his herd around him. This cattle raising would be but an aimiable idiosyncrasy were not the numbers growing to such an extent as to become a menace to the continued existence of the tribe.....A recent census made by one of the veterinary officers of the Colony estimates the number of livestock in the Kamba reserve as at least three times as great as the land can carry. Over wide areas the vegetation has been wholly removed, the surface has been broken by the goats which eat down to the roots, and on the slopes erosion has begun in its most dangerous form. The hillsides are purple and chocolate, because they have been bared down to the subsoil, and the rate at which the land loses its water is of course cumulative. In this destructive process the goat is the most active agent. It will be recalled how the goat in historic times has destroyed the fertility of Greece and other Mediterranean regions, denuding the hillsides and washing the soil into malarious swamps in the valleys, and this process is rapidly being repeated in East Africa. Some of the Wakamba chiefs are conscious of the ruin that is overtaking their country. They can recall districts where the grazing was good in their youth, but have now become desert; they agree as to the deterioration of the areas that are still carrying cultivation and stock. But they say their people generally fail to recognize the inevitable end, and are by no means disposed to change their outlook....."

# IECW TRUCK TRAIL CONSTRUCTION AT WARM SPRINGS

By Patrick Gray

Forest Supervisor, Indian Service

Since the inauguration of the Indian Emergency Conservation Work program, more has actually been accomplished in conservation measures on this reservation than in any five year period in its history.

Early in the season a general plan was laid down, consisting mainly of truck trail construction; and as soon as approval was received from the Office and funds made available, work was started and has been in continous progress since. If this work can be carried on another year, the fire hazard will be greatly reduced.

## Trails Against Fires

The timber is the most important natural resource of the Warm Springs Indians, and its worst enemy is fire. To control fires successfully, a rapid transportation system is vitally necessary; and most of our efforts have been toward this goal.

In addition to this, our truck trails have been planned with the idea of opening up areas in the higher mountain country for grazing units for Indian-owned cattle, in order that the lower range may be conserved for fall and winter feeding. Another point of view that has been considered is the improvement of the routes of travel for the Indians in their annual berry picking expeditions.

## Methods in A Rugged Country

Possibly a brief description of the methods which we have used will be interesting. Most of the country in which we have been working this season is very rugged and rocky, and covered with a dense growth of mature timber, reproduction and brush.

After the general location of where the new truck trail is to be built has been determined, some of the local Indians who are most familiar with that section of the country are called into consultation and the various possible routes are discussed with them; their advice has proved very valuable.

Where Warm Springs Indians, Under IECW, Built Trails - Whitewater Canon, Mt. Jefferson In Background

The actual route is then surveyed, checked and approved, and construction work is started. In the survey, grades and alignment are determined with the use of abney level, chain, and compass, except where the work is very heavy, when a transit is used. A crew is first started armed with axes and brush hooks, clearing the smaller trees and brush, piling and burning, followed by the fellers and buckers. Then the powder gang comes blasting the stumps. They are followed by the tractor gang which removes the logs and the shattered remains of the stumps. This leaves the right of way in condition for the grading gang, who use tractors and graders and bulldozers to make the finished surface. Often an additional crew is necessary to put in culverts and bridges. Finally a roadside clean-up gang goes over the ground to burn any brush which has been left and to fell the snags near the right of way, as we intend our truck trails to be effective fire breaks in the future. Many of these snags are cut up into wood which is hauled to camp for use there.

## The Human Side Of The Work

Unquestionably of even more importance than the physical improvements made in the forest itself have been the effects from the human side on the Indian personnel. Our camps are all under Indian foremen and leaders with a very small supervisory force of whites. They are gaining confidence; their morale and their health conditions have been excellent. The idea of promoting men from the ranks of the enrollees to be leaders and assistant leaders was one of the outstanding successes. It gave the men something to work for, with a tangible reward in sight.

The men live in clean sanitary camps; and when the project is a considerable distance from the camp, they are transported to and from work in trucks. Usually they take a lunch with them and make coffee during the noon hour. The Indian boys have proved themselves to be competent operators of all the equipment in use here, consisting of trucks, tractors, roadbuilders, graders, air compressors, and power drills; and they are also expert in repair work when necessary.

* * * * * * *

## "WE, THE PEOPLE - "

The following is an excerpt from a letter to Commissioner Collier from Superintendent A. H. Kneale of the Pima Indian Agency.

"I have heard people express the opinion that 'they will make a mess of it' (the Indians and self-government). Suppose they do? No mess they can concoct for themselves can be worse than the mess imposed by the present allotment system. Furthermore, it seems to me that 'We, the people of the United States' have been in more than one mess since the Declaration of Independence was executed. Suppose they do get in a mess? They will also get out of it, just as the people of the United States have, and both the 'getting in' and the 'getting out' will be educational."

# Telephone Line Construction

By Fred M. Newton

Telephone Supervisor, Indian Service

Approximately two thousand miles of telephone line will have been built on various Indian reservations throughout the United States in connection with the Indian Emergency Conservation Work, when all telephone projects are completed.

## Transmission

Due to the fact that the Indian Service telephone lines become a part of the Bell System network when connected to it, it is necessary to design the lines so that transmission losses will not be excessive. Transmission loss can be calculated, just as the strength of a bridge can be calculated. The unit used to express transmission losses in telephone circuits and equipment has been designated the "Decibel", abbreviated the "Db". The decibel is a unit of proportion, that proportion between the power at the speakers end of the line and the power at the receiver's end. Expressed mathematically, the decibel is equal to twenty times the logarithm to the base ten of the amount of current at the sending end divided by the amount of current at the receiving end.

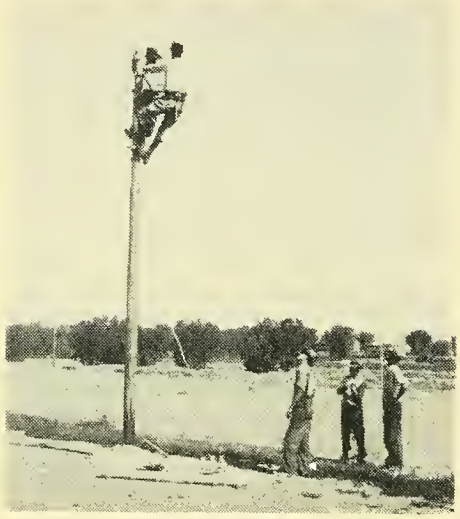
The allowable transmission loss between any two connected parties on the Bell System network should not exceed 27 decibels, and, as the Indian Service lines become a part of the network when connected for conversation to distant cities, it is necessary to select wire sizes, material and equipment to meet the prescribed losses. This requirement has been put in lines built under the Emergency Conservation Work program.

## Timber

The selection of pole timber for telephone lines depends upon the relative cost and durability of the timber available. Certain kinds of timber have a much longer life than other kinds; some poles contain natural preservative oils that give them a comparatively long life. Due to long hauls it is not practicable nor economical to use untreated pole timber on Indian Reservations, with one exception, that being in the case of juniper poles. The size and spacing of poles depends upon the sleet storm area wherein the line is to be built, the prevailing winds, the ultimate wire load and the size of wire to be used.

## Design

In designing the telephone lines that are being built under the Emergency Conservation Act, transmission requirements, life, strength and the use of the line were all taken into consideration. In some locations, due to long distances, it was necessary to use hard drawn copper wire; due to static conditions in some locations metallic (two-wire) circuits were built. Grounded circuits (one-wire and ground) were built when local conditions would permit. Iron wire was used when within transmission limits. In two particular instances it was necessary to use a steel core copper clad wire to obtain strength and meet the transmission requirements. Special high efficiency telephone sets were installed in a few locations to meet transmission requirements.



Indian Emergency Conservation Workmen Placing Guy Wires, Ft. Belknap.

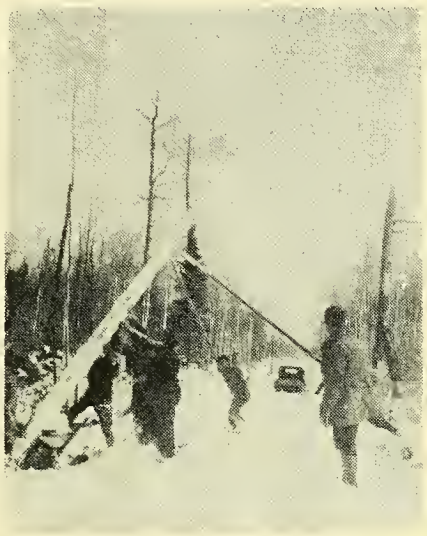
A typical Emergency Conservation Work telephone crew consisted of a line foreman, two linemen and from fifteen to forty-five Indians. One lineman, as a rule, supervised the hole digging and pole erection; while the foreman supervised the wire stringing. As the work progressed, Indians were given the responsibility of supervising hole digging, setting poles and climbing poles. In some locations, especially on projects where speed was not an important factor, the entire job was performed by Indians under the supervision of trained telephone men.

## Construction Procedure.

Under normal conditions the ideal method of procedure would be first to survey the line and make up the line record, which consists of a detailed record of pole numbers, locations and height of poles and the location of corners, anchors, long spans, and so forth; then to make up the list of estimated material required. However, due to the suddenness of the Emergency Conservation Act, it was necessary to assume that existing records were fairly accurate and the material lists were made up from those. The survey gang consisted of a lineman and two or three Indians. All pole location stakes were numbered and, after the line record was completed, it was turned over to the hole digging and pole erection crew, and the poles were graded and placed according to the line record. Brackets and insulators were attached and light-

ning wire installed, where designated, before the poles were erected. The poles were aligned in line and at right angles to the line. The average holes dug per day per man varied from three-fourths of a hole per day to eight holes per day, depending upon ground conditions. At some locations it was necessary to "shoot" almost every hole, and in some locations the holes had to be drilled by hand, which also cut down the average.

The wire stringing crew followed the pole crew, the wire being strung according to local conditions. In some locations it was necessary to pull the wire by hand, with a truck or by team. In some locations the reel remained stationary while at others it was carried by hand, in a truck or wagon. After the wire was strung out on the ground, it was raised into place on the pole with a wire raising tool, then pulled to proper sag according to temperature and span length and tied in.



Winter Telephone Line Construction, Lac du Flambeau

## Summary

Under the Emergency Conservation Act, much-needed telephone lines have been built with the result that many square miles of forest will have protection from fire in the future, and many communities will be served; old lines have been rebuilt; materials have been purchased at almost rock bottom prices; markets have been stimulated; jobs have been created and the construction work afforded an opportunity to train Indians for future telephone jobs.

# AXEMEN

By Richard Delaney

Group Foreman, Indian Emergency Conservation Work

When Indian Emergency Conservation Work was first launched there were many skeptics; certainly few imagined that out of the ranks of Indian workers would emerge axemen to rival in prowess the famous seven of Paul Bunyan's historic crew. Yet that is happening. On the Red Lake Indian Forest, where a point of land stands sturdily between two great fresh water lakes, an epoch of axemanship is in the making which may well stand as supreme in the annals of woodsmen of the future as the fabulous exploits of Bunyan's crew stands in the annals of woodsmen of the past.

## "The Point Later On"

Here, upon "the Ponemah Point", as it is known - Ponemah being derived from the Chippewa word 'Bonemah', meaning, roughly, "the point later on" - is an almost startling combination of virgin pine stands and Indians clinging wholesomely to their rich heritage of traditions and customs. It is as though, driven to this last outpost, the two make their final stand together. Seemingly that that stand be perpetually secure, a healthy regeneration has been allowed to both; and in furtherance of that security is the silvicultural program sponsored by Indian Emergency Conservation Work.

Silviculture is defined as the art of producing and tending a forest. Here for the present purpose the forest has already been produced, requiring now only tending, the most important area consisting of 1,300 acres of fine twenty-five year old white and Norway pine. As is characteristic of the reproduction of these species in the Lake States the stand suffers from heavy competition with aspen and birch, trees which the silviculturist terms as weed types under these conditions; it is also characteristic, particularly of the Norway type, that the reproduction, itself, be so dense as to require thinning. These two objects, then, removal of interfering weed trees and thinning where natural competition is severe, tending toward a very material improvement of the pine stand, constitute the motivating purpose of the axemen.

## Axemen---Modern Style

In practice the work is exacting. It is complex. The worker needs use not only his muscles but his mind. There are a dozen different ways of falling a weed tree without injury to the stand for which improvement is sought. The worker must know them all - and then invent new ones to meet the hundred varying conditions which arise each day. "Wigwamming", or "sky-hanging" one tree against another, that it may be slid down without injury to the pine, is not a fault but an achievement. Skill is required as a team mate to ingenuity, both guided by that good workmanship consistent with proper forestry practice. There is no place for reckless slashing. Stumps are cut at a conservative height. Hardwood slash is lopped and scattered, an art in itself. Coniferous slash is burned in openings without injury to the adjacent stand; burned too are insect infested, badly deformed or defective trees. Old trails are kept open with a view towards future protection. Material removed is utilized for fuel.

The men of Paul Bunyan had no such complex maze as this to tread in their work. One objective they had, and one alone, to get the timber out. With no regard for the future they followed out that objective, their work marking an epoch of destructive, devastating lumbering just as the present work marks an epoch of sane conservation, which means both use and perpetuity, of forest resources. That the workmen creating this epoch are Indians is no outstanding achievement, considering that thousands of Indians are at work today; but that Indian workers are <u>successfully</u> carrying on so complicated and exacting a project, with a very minimum of trained supervision, is certainly an achievement most outstanding.

## The Future

Though the material profits of the work are with the future - a "point later on" - yet profits equally important are immediate with the axemen themselves. This is a forest community. People and trees - the two are inseparable. They should be here always. They will be here always, properly managed. And from this work, practical application in a natural forest laboratory, the axemen are gaining a basis for that proper management. The skill, the knowledge they acquire now will be applied again and again. As the forest continues to develop it will continue to require tending. And, as the forest develops so will the axemen develop. Some of them will live to harvest the crop they

have grown. Their children will be growing with the trees, assimilating knowledge, their lives intermingled, both developing toward that "later on point" which proper forestry practice, thanks to the opportunity Indian Emergency Conservation Work has created, is making more secure, more desirable, and more tenable.

The work is more than a mere project - it is a prophecy. The axemen are the prophets. And, while not one man in a million puts his mark upon the page of history, these men are marking both the present and the future with their handiwork. Not even the famous seven of Bunyan's fables can exceed that achievement.

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Tribal delegations have been visiting the Office from many places during the past two weeks. We acknowledge the visits of the following - (if these are not all, they are those whose names have reached the office of INDIANS AT WORK to date. Others will be acknowledged later).

From Quapaw, Oklahoma; Osage, Oklahoma; Blackfeet, Montana; Fort Berthold, North Dakota; Crow, Montana; Menominee, Wisconsin; and Papago, Arizona.

## HUMAN ASPECTS OF THE IECW PROGRAM IN THE NORTHWEST

A much-needed report on some of the sociological benefits of Indian Emergency Conservation Work was volunteered recently by J. H. Mitchell, Regional Production Coordinating Officer. His statistical data relate to only eighteen reservations in the Dakotas, Montana, Wisconsin and Minnesota; but they seem to be a fair sampling of the IECW as a whole. They are a large sampling surely; these eighteen reservations account for about a quarter of the whole work, both in men employed and in funds allotted. The period covered is the half-year ended with December.

The maximum number of men on IECW pay rolls at those eighteen reservations, during the period, was 3,820. The total given employment, however, was 5,908 (or 54.7 per cent greater). This wider distribution of relief funds resulted largely from the policy of staggering employment; it brought relief to nearly 5,000 (4,840) different families.

The total of "Wages impounded" (deposited into Individual Indian Moneys for future needs) was $115,231. Three of the reservations did not report this data, but the "average amount to the credit of each enrolled Indian" at the reporting reservation was $31.17.

## Vocational Training Under IECW

Mr. Mitchell's data include an interesting census for his district of enrolled Indians who had been trained, by practical experience in the IECW to work at certain trades or to serve acceptably in supervisory jobs. In taking this census he applied a severe test. He requested each camp superintendent to "report only such men as you yourself would employ if the enterprise had been your own".

Following are the numbers of enrolled Indians who were reported as qualifying under that test:

| | | | |
|---|---|---|---|
| Camp Managers | 8 | Telephone linemen | 21 |
| Group Foremen | 30 | Trail locators | 5 |
| Sub-foremen | 109 | Carpenters | 59 |
| Cooks | 9 | Blacksmiths | 18 |
| Rodent control and blister rust foremen. | 17 | Truck drivers | 46 |
| | | Clerks | 39 |

## SOME OF THE PROBLEMS OF THE HEALTH DIVISION

By James G. Townsend, M. D.

Director Of Health, Indian Service

The Health Division is concerned not only with medical and surgical relief but with the promotion of individual and community health as well. Clinical medicine and public health are closely allied. Indeed, they cannot be separated and, when possible, Indian hospitals are used as public health centers, where clinics are held and advice as to preventive and remedial measures given.

Indian public health activities, as an integral part of our medical service, are developing as rapidly as our limited funds will permit. This development is shown by ninety-six public health field nurses, eleven special eye physicians and twenty-three dentists, with intensive health surveys made from time to time on certain reservations where complete physical examinations are given. These activities and observations help us in making the diagnosis as to what our problems are.

### Trachoma

We know that trachoma is one of our major problems. We have fairly accurate knowledge as to its prevalence in different part of the country. We know that it attacks less than one percent of some tribes and forty percent of others. We know that trachoma is curable when not treated too late, and that it is preventable. Eleven Special Physicians spend their time going from place to place treating this condition and instructing in its treatment and prevention. Our field nurses are finding cases, teaching prevention, advising how the disease can be cured and informing the people that possible blindness will be prevented if advantage is taken of treatments offered.

Yes, we know where the tra-

choma is and how to fight it with what field forces we have, with some measure of good being done; but we are handicapped by not having sufficient field personnel, which means insufficient funds.

## Tuberculosis

Tuberculosis is another enemy which the Health Division is attempting to combat. Improved hospitals, new sanatoria, and improved equipment help, but it is not possible to hospitalize every Indian who is tuberculous, due to shortage of hospital beds. Health surveys, including X-ray examinations, make it possible to detect early cases, and, if hospitalization is not possible, certain procedures can be carried out in the home to hasten the cure and prevent the spreading of infection.

The Health Division does not have the sole responsibility in this anti-tuberculosis campaign. Doctors and nurses in their daily routine can find suspected or real cases in the home, hospitalize these cases or advise home care, but this problem is more involved. It is wrapped up in social, economic and dietetic factors. The social service worker, through domestic adjustments and advice; the farm extension agent by demonstrating how fresh green vegetables are raised and encouraging this practice and teaching the value of vegetables as a food; the home economics teacher and home extension workers by nutritional teaching; the school teacher in common sense advice to children in tuberculosis prevention; the Agency Superintendent in encouraging the use of hospitals and periodical physical examinations; the local Indian organizations in indorsing health programs; and finally the Indian himself by putting into effect those practices which are known to prevent and cure tuberculosis, can make the combined effort which is necessary if we would succeed in combatting this second major health problem.

At Shawnee Sanatorium patients are taught these things and a regular curriculum is prescribed, equipping those cured or arrested to practice measures which are essential if they are to retain the ground they have won.

It is hoped that at some future date Special Tuberculosis Physicians can be placed in the field relative to tuberculosis control, just as we now have Special Physicians for trachoma prevention. But here again our funds are meager for the work confronting us.

## Dental Service

The Dental Service, with only eleven full-time travelling dentists and twelve local practicing dentists, attempts to serve approximately 260,000 Indians, of whom 100,000

are school children in over 900 schools. In Alaska one dentist alone is functioning. Dental prophylaxis is health conservation. The few dentists we have are doing much in saving permanent teeth, preventing focal infections, and teaching oral hygiene, but the field is large, the laborers few, the funds scarce. When the value of this phase of health work is better realized, it will develop as it should and as it is expected to.

Many other problems than these mentioned here are before us and there is much yet to be done. Real success depends upon the coordinated efforts of everyone and upon reinforcing our health workers with the help so badly needed.

## THE WAPATO IRRIGATION PROJECT

The following report comes to the Office from one of the important irrigation projects at present under way:

At the present time, and as now planned, the Wapato Indian Irrigation Project, Yakima, Washington, will require between $750,000 and $800,000 to complete. The ultimate irrigable area of this project is ap-

Creek Channel Overgrown With Heavy Brush. Indians Clearing Branches Out. See Picture Page 28

proximately 124,500 acres of which 99,572 acres are under constructed works; that is, in a position to secure delivery of water therefor. The Public Works Administration made avilable the sum of $106,000 for this project with which to carry on the construction program for the present fiscal year.

The following excerpt from the project engineer's report is interesting with respect to the number of Indians employed and the var-

ious types of work which they perform:

"Forty-one Indians were employed on Public Works Administration Project F. P. 258. The work being done is the regular construction program including features only that are necessary to complete the project.

gravel, making digging difficult.

"Ten Indians were employed on a crew constructing a concrete weir in the Main Canal. They did all the excavating for foundation and cutoff walls and poured the concrete.

Creek Channel Cleared By Indian Crews Of Heavy Tangle Of Branches. The End Of The Job Shown On Page 27

"Seventeen Indians were employed clearing brush out of the Toppenish Creek channels... The heavy tangle of brush..... choked the Creek channel causing the flood waters to overflow the banks....

"Nine Indians were employed in digging pole holes for the Satus Transmission Line. These men did very good work, averaging two six-foot holes per shift. Throughout most of the line the holes were in

"Four Indians worked on a small crew constructing concrete division boxes and head gates on Pumping Unit Number 2.

"One Indian truck driver services the two draglines, one of which operates three shifts daily, digging drainage ditch, and the other, of which operates two shifts daily excavating the high-line canal on Pumping Unit No. 2".

## HOW THE INDIANS BUILT ROADS UNDER THE PUBLIC WORKS ADMINISTRATION AT TURTLE MOUNTAIN

Elsewhere in this issue of INDIANS AT WORK there is an account of truck trail building under the Indian Emergency Conservation Work program. Lest readers think there is a plethora of material on roads here, it should be explained that the two pro-

Snow Fence After Snowfall, Turtle Mountain. (See Page 32)

grams are widely different. IECW truck trail building is concerned with new lanes into the forest primarily for fire protection and fire fighting purposes. The Public Works road program was chiefly reconstruction on existing roads - the major roads on the reservations, in most cases. New roads built were of similar status.

The following month by month report from Turtle Mountain will give an idea of the job undertaken there, and on other reservations-

how they manouevered with the cold to find what was possible under difficult weather conditions and how they tried to keep the largest possible number of men at work through the bad season.

Road Work began on the Turtle Mountain Indian Agency August 22nd, 1933, when Mr. C. V. Sluyter, Road Supervisor reported for duty. Men and teams were put to work the following day on all available projects. Initial steps were taken to procure road machinery to be used prior to delivery of equipment bought for this Agency. With only a few weeks remaining before winter months and extreme cold weather, every effort was made to speed the progress of the work, and give employment to the largest number of Indians practical. Graveling the grounds around the Agency buildings gave immediate employment to a number of men and teams. Brushing crews were organized in different sections of the reservation. Enrolled Indians with the largest families were given preference in every case. Due to the great number of applications and limited employment, the work was divided into shifts of two-weeks duration. In this way each Indian received his pro-rata share of the work. During the remaining part of August, forty-five men and nine teams were employed.

Running Line Through Brush For Relocating Road, Turtle Mountain

Delivery of the Model L

Caterpillar Tractor, purchased thrcugh Washington Office for this Agency, was made August 23, but the machine was not in service until September 6th, at which time this office contracted for the use of one elevating grader and seven dump wagons. Grading work began immediately.

quainted with their work. It was not until the latter part of the month that frost began to slow the progress. Snow fell the 17th of the month but not in quantity sufficient to retard the work. During the month of October two hundred and fifty-nine men and one hundred fifteen teams were given employment.

Scene Shown On Page 30 Two Days Later. Work Done By Indian Crews

The progress of the work was impaired during the month of September due to the shortage of machinery; however this office contracted for the use of one Caterpillar, one 12-foot grader, four dump wagons and a second elevating grader during the latter part of the month. During the month of September one hundred and twenty-one men and sixty-five teams were given employment.

Work advanced with rapidity during the month of October. With the acquiring of machinery the Indians became ac-

During the month of November work was carried on under extreme difficulty. Although dirt was moved up until the 14th of December it was a slow process and a great hardship to both men and machinery. Fall rains soaked the ground which necessitated the use of dynamite. Approximately 1000 pounds of dynamite were used during this period to break the frost so that rippers and plows might operate.

December 14th all grading work was suspended due to the

deep frost and heavy snow. During the period December 1st to 14th, one hundred and forty-seven men and seventy-four teams were employed.

Immediately we opened a large gravel pit; set up a gravel screen belonging to this Agency and began graveling the new road completed to this date. No graveling had been done prior to this time as practically all available Indian teams were employed in grading work. The average distance of the haul is about 3 miles from the pit to the dump. Each Indian is required to furnish his own sleigh, team and box of one yard capacity. During the latter part of December the weather was extreme and work did not progress to any appreciable degree, however many of the Indians continued even though the weather was dangerously cold. Several checks, hands and ears were frozen.

During the first half of January, one hundred and sixty-two men and ninety-two teams were given employment.

During the last half of January this figure increased to two hundred and fifty-one men and one hundred and twenty-nine teams.

Brush Snow Fence Before Snowfall, Turtle Mountain

Another project placing a large number of Indians to work was our snow-fencing project. From a standpoint of Indian labor the program was ideal. To build 24,000 feet of brush snow-fencing a total of $2,099.12 was spent. Of this amount 88.5% went for labor and 11.5% for material. Approximately 10% of the amount spent for materials went to the Indians for poles and brush. In other words, 98.5% of the total $2,099.12 went directly to the Indians.

This project provided over 800 days of man-labor.

## INDIAN SUPERVISORS REPORT ON IECW PROJECTS

The following notes are taken from weekly reports on IECW projects. In every case the individual reporting is an Indian, directing Indian workmen.

Shoe String Gully At Chilocco. We are now working on building brush dams in what might be called a shoe string gully, it is so crooked. No doubt in a few places we will make some cuts to straighten out the gully. The banks in places are somewhat steep and erosion has taken place well back from the channel proper. These banks we will probably plow in, revegetate and build a diversion dam on upper side, thereby forcing the water around and not over the portion plowed and revegetated. Alexander Pambogo, Foreman.

Clearing And Hauling At White Earth. Project Number 3, so-called the Ponsford Camping Grounds, about 85% finished. Work remaining to be done is, hauling sand on muck covering on corduroy. The length of the corduroy being about 866 feet. Clearing of camping grounds on Project 1 consists of clearing slash 100 feet around entire five acres tract. Project 4 on north end of Rice Lake is being started by five men living on the location. Charles Goedwin, Group Foreman.

Deep Hollow At Eastern Cherokee. We put in twenty-two feet culvert in deep hollow and cribbed in both ends good - and cribbing on switchback now with thirty-foot logs, but that switchback is not finished yet. Jona Feather, Leader.

Wood For Camp And Widows At Pine Ridge. Twenty-five men working in Corn Creek timber reserve, burning brush, getting wood for camp and widows for the last four days. And four men working on tool house. One man and truck driver went to Pine Ridge after a load of freight fer the Farm Station. One man doing blacksmith work and looking after the light plant. Four men working in kitchen and dining room. Henry C. Cottier, Foreman.

Work In Snow At Taos. Twenty-three men worked on fencing while the others cut cedar posts and hauled for fence. This was hard work because of snow and roads were bad. Work was stopped because of disputes but everything is settled and all are satisfied. The men are all happy in their work. James Mirabel, Foreman.

Weavings At San Xavier. At present we have sixteen men on erosion work which we started about one mile south our headquarters, with the intention of putting some brush dams around and in across the washes. We are using rocks between the brush weavings, which have to be hauled from the nearby hills on trucks. And in places where we have to build roads so as to get as near as possible to our weavings. Jose S. Juan is in charge of the men doing this work. Much of it has been sloped down but as we can see there is so

much to be done in that line so we have to have the blacksmith make us crow bars and tools we need to break down or slope down banks. Mesquite posts are being used in our weavings and everything seems to be going on very satisfactory. Frank Rios, Foreman.

143 Post Holes At Picuris. This week we set and digged post holes 143, covering 1-1/2 mile. Wiring two miles. We are up to where we can not go with the truck, so we are fixing a wagon road so the truck can be able to take up the men to work. Ramon Martinez, Foreman.

Working For Ourselves As Well At Siletz. In beginning this project we have in mind that we are working for ourselves as well as receiving a wage for our time - every man on the job from Group Foreman is an Indian and enrolled on the Siletz Reservation. We are doing trail work that has been neglected for over a period of nine years and we intend to follow the old trails wherever possible in order to have the trails ready for this coming season.

We began work at the quarter section corner to Sections 17 and 18, T 9 S., R. 9, W. (Siletz Tribal Timber.) Work was chiefly in the nature of slashing brush and widening trail by cutting logs, building bridges wherever crossing creeks was necessary. Trail follows up Palmer Creek for one half mile and then cuts due northeast to southeast corner of Tribal Timber Reserve. On this line it was very rough going as many logs had to be cut in order to clear the trail; some grading and fill ins were necessary. Last half day was very slow because many windfalls, many quite large, were encountered. Up to this point we have made rapid progress by following old trails but next week's program calls for a lot of grading and thick underbrush, as well as many windfalls, and this will retard our progress considerably. Our trails are being made to conform to the standard width as maintained by the Lincoln County Fire Patrol Association, six feet in width.

For the time being the crew of eight men are staying at their homes and coming to work each day, but we plan on establishing our own quarters nearer the scene of our labors so that we will have more time for leisure time. John V. Adams, Group Foreman.